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Performance Measurement in Healthcare: Applying ROI to Human Capital Investments

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Summary

Practitioners are faced with continuing calls to demonstrate value for money and impact on their spending to improve performance. Many of these improvement initiatives are geared towards people, the human capital within the organisation. Consequently, there appears to be an increase in the use of financial metrics, and in particular, the return on investment (ROI) to demonstrate a return on investing in human capital. However, academic research on how these metrics are learnt and applied in practice has lagged behind. This development paper reports on a study exploring how ROI is being learnt and applied within a healthcare organisation. It highlights the challenges faced and shares some of the practices employed to address these challenges. These included improved project management skills, fostering appropriate stakeholder engagement, and identifying behaviour that needed to be changed.

Word Count: 1,956

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Introduction

Performance measurement is crucial for decision-making, accountability and a prerequisite for managing effectively (Greiling & Halachmi, 2013; Guerra-Lopez & Hutchinson, 2013). This is especially the case in public health scenarios because of “rising quality standards and scarce resources” (Pfiffner et al., 2021). Within management, return on investment (ROI) is one of several financial metrics increasingly advocated and used to evaluate various types of investments, such as human capital (HC) investments. However, there is a significant discrepancy between the uptake of ROI for HC investments and growing evidence that the implementation process is problematic and actual usage limited. As Sparrow and Cooper (2014) note, organisations need to be able to evaluate how managing people can serve to create value for the organisation. However, while evaluating at the aggregate level is useful for assessing the overall performance of the organisation, a more granular analysis at the level of the HC investment initiative is also required. This is to determine effectiveness, efficiency, impact and/or returns for the organisation (Provo, 2000; Sakalas and Liepé, 2011). Hence the growing interest in using financial metrics to evaluate HC investments, e.g., return on investment (ROI) approaches. Such approaches, with the ROI metric embedded in their processes, appear to promise the ability to evaluate HC initiatives to demonstrate value or impact. But, how do these types of metrics been diffused to other domains from where it was created?

Return on Investment and Human Capital

In their seminal work, Johnson and Kaplan (1987, p. 11) argued that ROI is “the most important and the most enduring management accounting innovation”. Some 30 years later this can still be observed. ROI has permeated managerial discourse in accounting discussions (Hopper and Bui, 2016, Seal, 2010). Although it has been mainly used to calculate the returns on investing in physical capital (i.e., plant and equipment), more recent applications can be seen in other domains. These include marketing (Rust et al., 2004), information systems (Botchkarev and Andru, 2011) and human capital (Phillips, 2003; DiBernardino, 2011; Hesketh et al., 2014; and Wang et al., 2002). However, there is very limited research on how the metric is applied in practice. Steen and Welch (2011, p. 59) wondered about the ROI metric’s applicability to human resources and argued that “the potential of financial metrics such as return on investment” have not been fully investigated. Even so, in order to study the metric, it is necessary to study the approach in which the metric is embedded.

Steen and Welch’s (2011) study was exploratory and focused on a discrete activity: international assignments in the corporate sector. No ROI approach (or formal process/system to carry out ROI assessments) was being applied at the participating organisations. Therefore, it is likely that there would have been different steps undertaken to assess the ROI of an international assignment across the participating firms. As such, there is a lack of clarity in the application of the process and the formula the participants used to measure the ROI of their international assignments. Therefore, it is difficult to assess at what point the application of the process of implementing ROI becomes problematic.

There are three widely used ROI approaches in the UK, each of these embed the metric in their processes: Phillips' ROI Methodology (Phillips, 2003), Social Return on Investment (SROI) (Nicholls, et al 2012) and the abdi ROI Recommended Approach (Massy and Harrison, 2014).

Whilst Phillips et al., (2015) suggest that these approaches are clear, logical and simple to apply, research has shown that this is not necessarily the case in practice (Millar and Hall, 2013; Wilson and Bull, 2013). Overall, how financial metrics are being used to measure investments in HC is a potentially important yet controversial area, one that has lagged in academic research. Our study addresses this knowledge gap by exploring this phenomenon within the healthcare sector, as a human capital rich environment. Consequently, our research question is: *What is involved in learning and applying the approach and, by extension, the metric?*

Methodology

The research question seeks to ask what is involved in learning and applying a ROI approach. Case study research fitted well as the specific research strategy; it falls within the constructivist and interpretivist research paradigm and can be employed with qualitative research, as well as accommodating contextual conditions (Baxter and Jack, 2008). Addressing our research question entailed identifying and having access to an evaluation approach that includes a clearly articulated process for applying the ROI metric. Therefore, the abdi ROI Recommended Approach was studied; it adapts concepts primarily from Phillips (2003) and Kirkpatrick's Learning Evaluation Model (Kirkpatrick and Kirkpatrick, 2007). Access to data for both the approach and participants was made available through abdi Ltd.

The research utilizes an exploratory embedded case study approach. This is well suited to this field of interest as it treats the diffusion of the ROI metric to HC investments as a single case study with several units. The units are the records of participants' experiences of attempting to apply the ROI metric via the ROI approach. Data for these units was collected by direct observations of workshop participants, interviews and document analyses (workbooks, participant assignments, etc.). This developmental paper presents the healthcare units, which have been summarised in Table 1:

Table 1 Summaries of Embedded Units

Units	Summaries	Observation	Interviews	Document
<i>Harriet*</i> , <i>HN</i>	HN was a strategic health authority within the NHS. They began funding abdi workshops to equip training personnel to be able to demonstrate the impact of training. Harriet has been working with HN for around 30 years in a variety of roles. Her current role was at a	N	2 (1 with Hannah)	Y

Units	Summaries	Observation	Interviews	Document
	strategic level and she worked closely with a university and two colleges in her area to conduct the training required for her learners. She was one of the first to attend the abdi workshops.			
<i>Hannah*, HN</i>	Hannah was also one of the first persons to attend abdi's workshops and has worked with HN for about 10 years as a manager for Learning and Development (L&D). She subsequently joined a Commissioning Support Unit in April 2013.	N	2 (1 with Harriet)	Y
<i>Hank, HN</i>	Hank worked with Harriet in one of the units overseen by HN. He completed the ROI Foundation award in 2012. Prior joining HN he ran projects in another organisation and later managed a department within a social care charity.	Y	3	Y
<i>Hazel, HN</i>	Hazel worked in one of the Teaching Trusts overseen by HN, which employed around 13,000 employees. She collaborated with a number of different stakeholders including key hospital departments as well as university experts. She developed e-learning packages that were normally offered indefinitely. They were not assessed on whether they were effective or had any impact.	Y	4	Y

Applying ROI within Healthcare

A useful framework for making sense of the case findings utilises Argyris and Kaplan's (1994) approach to implementing new technical theory in order to provide a sound basis for managerial action. This describes the series of processes required to implement an innovative technical initiative beyond aligning the interests and incentives of participants.

HN funded ROI courses for relevant staff in their region, reflecting Argyris and Kaplan's Process I step 1: Education. This helped the implementation of the approach across the region. However, although they were supporting the implementation of this evaluation approach (Argyris and Kaplan's Process I step 2: Sponsorship) it was not enough,

support/sponsorship for this kind of organisational culture change required strong support from higher up the chain of command within the NHS, especially during the Action phase (Argyris and Kaplan, 1994). Hannah and Harriet could be considered Change Agents in both phases, while Hazel and Hank were Targets in the Action phase and not part of the Analysis phase. There also needed to be alignment of incentives to actual applications of the approach (Argyris and Kaplan's Process I step 3: Aligned Incentives) once the ROI qualification had been earned, since there appeared to be persons who have gained it but do not apply it to evaluating their L&D initiatives.

For Argyris and Kaplan's Process II: all the participants are externally committed to applying the approach since HN has committed to this being the L&D evaluation approach used in their region. Before taking redundancy, Hazel appeared to be internally committed to applying the approach; she persisted with it even though she found the course boring. Having invested considerable time, effort and resources to learn and apply the approach, it could be said that Hannah and Harriet are deeply internally committed to seeing it embedded in HN. Table 2 summarises the key findings in relation to Argyris and Kaplan's processes:

Steps	Hannah	Harriet	Hank	Hazel
Process I: Education				
ID needs gap	Part of first cohort to participate in ROI course following HN's initiative to identify L&D training needs gap.	Part of first cohort to participate in ROI course following HN's initiative to identify L&D training needs gap.	ROI approach being used in his department; works with Harriet.	Interested in evaluating L&D courses to determine ROI.
Articulate new approach	The abdi ROI recommended approach was selected (initially it was Phillips' ROI Methodology) and funded by HN.	The abdi ROI recommended approach was selected (initially it was Phillips' ROI Methodology) and funded by HN.	Signed up and attended Foundation course.	Signed up and attended Foundation course.
Provide examples	Initially, brochures, leaflets and websites, later via workshops, workbook and book.	Initially, brochures, leaflets and websites, later via workshops, workbook and book.	Colleagues, workshops, workbook and book.	Colleagues, workshops, workbook and book.
Process I: Sponsorship				
Phase 1 – Analysis	Change Agent	Change Agent	N/A	N/A
Phase 2 – Action	Change Agent	Change Agent	Target	Target
Process I: Aligned Incentives				
Organisational Enablers	Provision of information: the ROI course.	Provision of information: the ROI course.	Provision of information: the ROI course.	Provision of information: the ROI course.
Process II: Internal Commitment				
External	Yes	Yes	Yes	Yes
Internal	Yes, deeply	Yes, deeply	No	Yes

Table 2 - Argyris and Kaplan's Processes within HN

By applying the approach, the L&D practitioner learnt how to look under the bonnet of the impact of their initiative, so to speak. It pushed these practitioners to reject the assumption that doing the course meant the learner automatically improved their work. They were also now approaching L&D in a different way by bringing the business of health to their roles, i.e., looking at the whole picture and how L&D fitted in that picture, which was not something they had come across in their own preparations for their roles. Learning the approach instilled the importance of evaluating what they did in terms of the strategic objectives of the organisation. This was not only among L&D practitioners but also other stakeholders, e.g., clinicians, who encountered the approach through these ROI-qualified practitioners. They too were beginning to understand the business of health (Hannah, HN).

The cases highlighted a number of similarities, shared learning and issues, when trying to actually apply the approach to an initiative. These included improved project management skills, fostering appropriate stakeholder engagement, and identifying behaviour that needed to be changed. Hannah and Harriet agreed that learning the ROI approach had helped to build their confidence to not only defend the approach but also to make changes in their own practice, challenging where necessary.

A key message throughout these case studies was whether L&D initiatives were able to demonstrate that they were making a difference.

Hannah	Colleague
<i>"And he said to me,</i>	<i>'my training has been evaluated as great'</i>
<i>and I said, 'how do you know it's great?' And it's quite challenging to say that because he said,</i>	<i>'what do you mean, how do I know? Are you saying that my training is not very good?'</i>
<i>'No, I'm not say that. What I'm saying is; how do you know it's great? Other than them telling you, how do you know it's made a difference?'</i>	<i>'Well, I'm not sure I can say that?'</i>
<i>'So how do you know it's great?' you know, so I said, 'I'm not saying what you do isn't in form and it isn't doing the right thing but how do we know we've got the right people on the programmes to take back what you want them to do?'"</i>	

Table 3 Hannah's interview with colleague [Hannah, interview 2]

In the discussion from Table 3, it can be seen that a training event that is considered to be great needed to demonstrate that it made a difference, i.e., the right people attended and had taken back new knowledge to their respective areas. This is one of the main messages from the ROI approach, which had obviously been internalized by Hannah and become part of her practice.

The difference being made should be demonstrated at the individual level, i.e., what learners were actually doing differently that was better. In this sense, there appears to be more focus on evaluating to L3 (application and implementation). This could be because these participants have L&D roles, where they were responsible for changing the behaviour of learners that attended their events. However, starting at L4 (impact), the organisational need or opportunity, is advocated in the approach.

Sometimes the evaluation of the L&D event cannot demonstrate that a difference had been made but instead it highlighted that there was another issue that was the source of the problem. Hannah and Hazel found this out in their projects when initial improvements in organisational performance that followed their initiatives were reversed shortly after but both went on to ascertain the real source of the problem. In both cases, early feedback suggested that the real source of the problem was their IT system. For Hannah, the IT system was deemed non-user/practitioner friendly. At first, Harriet's project team thought that the training for their IT system was inadequate. However, following a focus group it was revealed that the issue was more systemic to the way data was manually collected and stored in patient files. Incorrect and incomplete data was being recorded because the patients' manual files were haphazardly organized. Nevertheless, this is one of the benefits of evaluating initiatives promoted by evaluators, i.e., the evaluation not only shows the positive results but also identifies where negatives occur that need further investigation.

Nevertheless, for both projects the question still remained, would the training programme have been required if a proper training needs analysis had been carried out? Training needs analysis is recommended in the ROI approach but there may need to be more information provided on the how this is done as part of the Foundation workshop.

Getting stakeholders to understand the approach was a successful endeavour for Harriet. Since they had already agreed to and completed the Foundation workshop, they were cognisant of the kinds of data required and why it was required. She worked with them to gain access to their electronic portfolio for the required data. Using electronic, specifically online tools, helped to improve data collection. Both Harriet and Hazel adopted similar strategies to improve data collection, i.e., their learners could not receive their certificates until they had completed their L1 evaluation.

Hannah, Harriett and Hazel's project teams included key stakeholders who had access to the required data; in Harriett and Hazel's case all the required data. This was instrumental in them completing their evaluations, even though the results were disappointing for Hazel.

Conclusion

As this is a developmental paper, we are seeking feedback to shape the paper going forward. Specifically, what literature to include? In the meantime, continued data analysis will be undertaken.

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